

Ship April 1, 2015

Work Order ID 130446

130446

Wednesday, March 11, 2015 3:55:14 PM

Page 1

Item ID: D4342-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Step, LH Maintenance

Start Date: 3/12/15 Start Qty: 30.00

30

Cust Item ID:

Required Date: 3/23/15 Req'd Qty: 30.00

30

Customer:

Reference:

Run Start *NR1*

Approvals: Process Plan: [Signature] Date: 15-3-11

Tooling: _____ Date: _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D4342	A

100 Large Fab 0.00

100

Large Fab

Large Fab

Memo

0.00

Large Fab

1-Cut D4342-1 using D2622 extrusion as per Dwg D4342
2-Drill, c/sink one hole on top of step as per dwg
3-Deburr and bevel ends for welding

30x CC 15-3-18

Pto →

110 QC6- Inspect dimensions to drawing 0.00

110

QC

Memo

0.00

Quality Control

30 MAR 18 2015

DAS
24
9-30

120 Weld per dwg A/R Aluminum rod Batch: B128385 0.00

120

Large Fab

Large Fab

Memo

0.00

Large Fab

1-Weld end cap (ONE END ONLY)
2-Grind end cap welds flush
3-weld lugs as per Dwg D4342

30x CC 15-3-26

DQA:

Date: 15/04/08

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date: 15/04/06

Work Order update only ☐

Work Order: <u>130446</u>	DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS			
Part No. <u>D4342-041</u>		Skid-tube ☐	Crosstube ☐	Water Jet ☒	Engineering ☐
NCR No. <u>15-4795</u>		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
		Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design				Found D3458-1 to have		Scrap + Destroy			
Doc/Data		#		Moved on w/j table. During		D3458-1 + Repl			
Equip/Tooling		120	x1	Manufacture.					
Handling/Pre									
Material									
Operator									
Offset/Setup	15/03/24			RL Tabs not big enough to HOD	Q2042	B 130460 x1	CC 15-3-24		
Process				Part / Process.	15/03/24	→ \$2.70		15/03/24	15/03/24
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☒ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge	☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Page 2

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Revision ID:

Stop ***NS2***

Item Name: Step, LH Maintenance

Start Date: 3/12/15

Start Qty: 30.00

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Cust Item ID:

Required Date: 3/23/15

Req'd Qty: 30.00

30

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC9- Inspect visual per QSI004- Fusion Welds

0.00

130

QC

Memo

0.00

Quality Control

30x SJ 15-03-26

140

QC5- Inspect part completeness to step on W/O

0.00

140

QC

Memo

0.00

Quality Control

30x SJ 15-03-26

150

Chemical Conversion Coat per QSI005 4.1

0.00

150

HandFinish

Memo

0.00

Hand Finishing

30x CC / 04/15/3/22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Work Order ID 130446

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Wednesday, March 11, 2015 3:55:14 PM

Item ID: D4342-041 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Step, LH Maintenance
 Start Date: 3/12/15 Start Qty: 30.00 ***30*** Cust Item ID:
 Required Date: 3/23/15 Req'd Qty: 30.00 ***30*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							DAS 24 9-89
160	QC	0.00				30			15-03-30
Quality Control	Memo								
170	Weld per dwg A/R Aluminum rod Batch: B130855	0.00							
170	Large Fab	0.00				30x	CC	15-4-1	
Large Fab	Memo								
	1-Inspect for foreign object per QSI 024 2-Weld Remaining end cap as per Dwg D4342 3-Grind end cap weld flush as per dwg D4342 4- install rivert as per dwg								
180	QC10- Inspect visual per QSI004- ground welds	0.00							
180	QC	0.00				30			DAS 24 9-89
Quality Control	Memo								

APR 01 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Wednesday, March 11, 2015 3:55:14 PM

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Page 4

Item ID: D4342-041 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Step, LH Maintenance
Start Date: 3/12/15 Start Qty: 30.00 ***30*** Cust Item ID:
Required Date: 3/23/15 Req'd Qty: 30.00 ***30*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							DAS 24 9-89
190									
QC	Memo	0.00							
Quality Control									
200	Chemical Conversion Coat per QSI005 4.1	0.00							
200									
HandFinish	Memo	0.00							
Hand Finishing									
210	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
210									
Powdercoat	Memo	0.00							
Powder Coating									

APR 01 2015

30 CC / DL 15-4-1

START: 3:30
OVEN T: 320
FINISH: 4:00

30 15-4-1

DAS
34
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Work Order ID 130446

130446

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Wednesday, March 11, 2015 3:55:14 PM

Item ID: D4342-041 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
230	Identify as per dwg & Stock Location: _____	0.00							
230									
Packaging	Memo	0.00							
Packaging									
240	QC21- Final Inspection - Work Order Release	0.00							
240									
QC	Memo	0.00							
Quality Control									

PPP130453

308 8015-04-2

MLJ 15-04-02

MF
15-4-02

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Doc/Data									
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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

Wednesday, March 11, 2015 3:56:09 PM

Page 1

Work Order ID: 130446

130446

Parent Item: D4342-041

D4342-041

Parent Item Name: Step, LH Maintenance

Start Date: 3/12/15

Required Date: 3/23/15

Start Qty: 30.00

Required Qty: 30.00

Comments: IPP REV:A NEW ISSUE 11-12-22 JLM VERIFIED BY:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D2622-120C		Manufactured	No				Each	53.9200		2			
D2622-120C									**			CC 15-3-17	
Step Extrusion													

Location	Loc Qty	Loc Code
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WA003	53.92	
125381	53.92	
	Each	91.0000

D2734		Manufactured	No				Each	91.0000		30			
D2734									**			CC 15-3-18	
Step End Plate													

Location	Loc Qty	Loc Code
----------	---------	----------

WA003	91	
124317	5	
125805	5	
128881	21	
129583	60	
	Each	91.0000

D2734		Manufactured	No				Each	91.0000		30			
D2734									**			CC 15-3-	
Step End Plate													

Location	Loc Qty	Loc Code
----------	---------	----------

WA003	91	B130457
124317	5	
125805	5	
128881	21	
129583	60	

(2)

(30x)

(30x)

(30x)

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐															
Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Picklist Print

Wednesday, March 11, 2015 3:56:09 PM

Page 2

Work Order ID: 130446

130446

Parent Item: D4342-041

D4342-041

Parent Item Name: Step, LH Maintenance

Start Date: 3/12/15

Required Date: 3/23/15

Start Qty: 30.00

Required Qty: 30.00

D3458-1

Manufactured No

Each 33.0000 30

D3458-1

Step Mounting Plate

**

CC 15-3-26

Location

Loc Qty

Loc Code

WA003

33

B130460

120233

8

122211

25

Each 23.0000

30

**

CC 15-3-26

D3458-3

Manufactured No

D3458-3

Step Mounting Plate

Location

Loc Qty

Loc Code

WA003

23

B130461

121670

2

122212

21

Each 290.0000

30

**

CC 15-3-26

MS20601-AD4W2

Purchased No

MS20601-AD4W2

Rivet

Location

Loc Qty

Loc Code

ST308

281

121255

1

m131467

280

WA003

9

m126975

9

30x

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

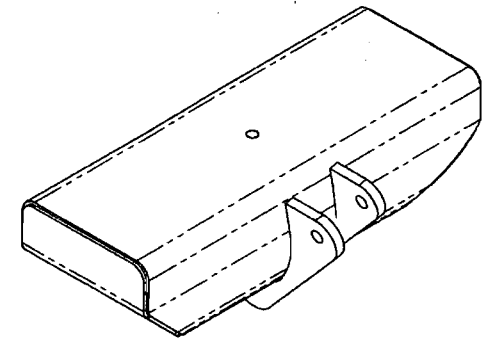
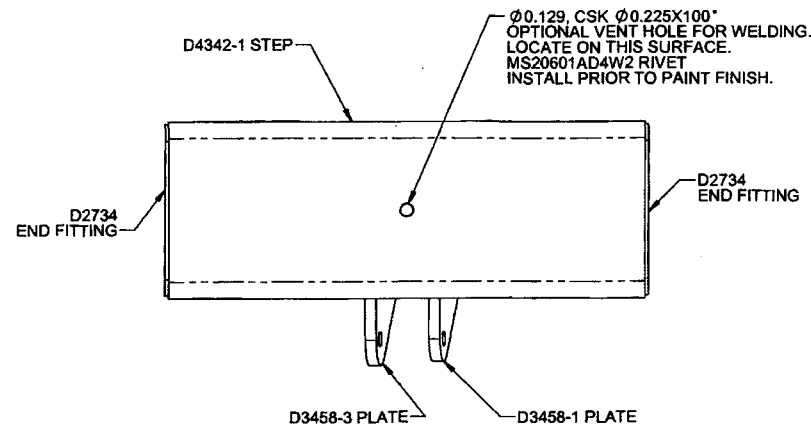
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Crosstube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐
--	--	---

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

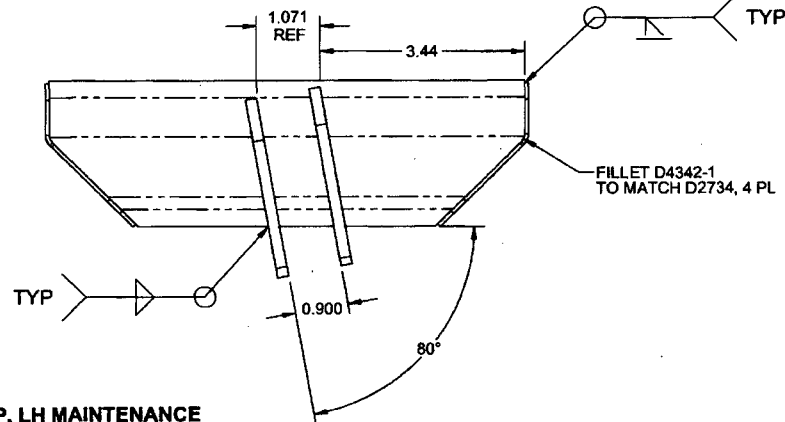
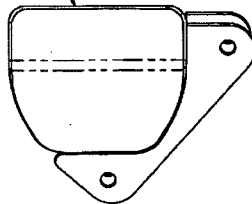
FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

ITEM	QTY -041	P/N	DESCRIPTION
1	X	D4342-041	STEP, LH MAINTENANCE
2	1	D4342-1	STEP
3	2	D2734	END PLATE
4	1	D3458-1	PLATE
5	1	D3458-3	PLATE
6	1	MS20601AD4W2	RIVET (OPTIONAL)



2 APPLY BLACK
ANTI-SKID ON TOP
SURFACE TO BOTTOM
OF TOP RADIUS



D4342-041 STEP, LH MAINTENANCE

RELEASED
2011-05-26
JH

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: P/N & B/N PER DART QSI 044 6.6 (REMOVABLE TAG)
- 7) WEIGHT: 0.65 lbs
- 8) WELDING: PER DART QSI 004

15-3-11

REV.	NEW ISSUE	DESCRIPTION	CP	10.12.17
DESIGN			BY	DATE
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	10.12.17			

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4342** REV. A
SHEET 1 OF 3
TITLE **STEP, MAINTENANCE** SCALE NTS

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DART AEROSPACE LTD.

CHAPTER 11 - MARKINGS & PLACARDS (11-00-00)

D3108-9 PLACARD

(LOCATED IN THE LOWER CORNERS ON THE INSIDE SURFACE OF EACH D3136-041/-043 WINDOW THAT IS INSTALLED AS A D412-709-011/-013/-019 KIT. THESE PLACARDS ARE NOT APPLIED TO D412-709-015/-017/-021/-023 KITS)

EAST
2011-05-26

ICA Page 1

ICA-0412-09
8 blank

DART AEROSPACE LTD.
MAGNUSBURY, ONTARIO, CANADA

REV. A
SHEET 2 OF 3
SCALE
NTS

STEP 11-00-00

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DESIGN	
DRAWN	
CHECKED	
MFG. APPR.	
APPROVED	
DE APPR.	
DATE	10.12.17

**EMERGENCY
PUSH HERE**

D3108-9

Ø0.129, CSK Ø0.225X100°
OPTIONAL VENT HOLE FOR WELDING.
LOCATE ON THIS SURFACE.
MS20601AD4W2 RIVET
INSTALL PRIOR TO FINISH.

FILLET D4342-1
TO MATCH D2734, 4 PL

TYP

D3108-9
PLACARD

D2734
END PLATE

D3458-3 PLATE

D3458-1 PLATE

D3118-3 SIGN ASSEMBLY

LOCATED BELOW THE WINDOW ON THE INSIDE SURFACE OF THE DOOR ON EACH D412-709-011 ESCAPE PANEL MODIFICATION KIT

D4342-1 STEP

3.41

80°

0.900

D4342-1 STEP, RH MAINTENANCE

**EMERGENCY EXIT
PUSH WINDOW AT
LOWER CORNER**

D3118-3
SIGN ASSEMBLY

D2734
END PLATE

2 APPLY BLACK
ANTI-SKID ON TOP
SURFACE TO BOTTOM
OF TOP RADIUS

ITEM	QTY	P/N	DESCRIPTION
1	X	D4342-042	STEP, RH MAINTENANCE
2	1	D4342-1	STEP
3	2	D2734	END PLATE
4	1	D3458-1	PLATE
5	1	D3458-3	PLATE
6	1	MS20601AD4W2	RIVET (OPTIONAL)

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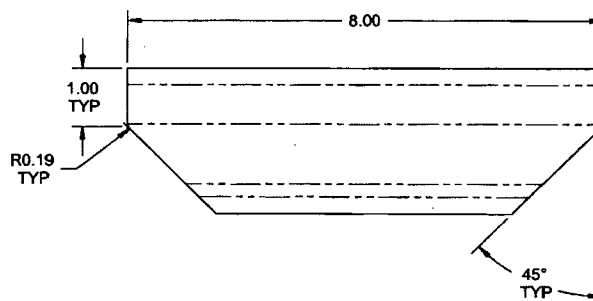
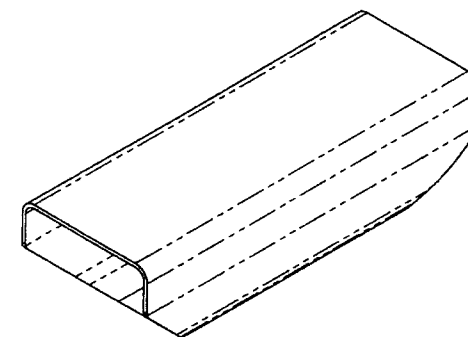
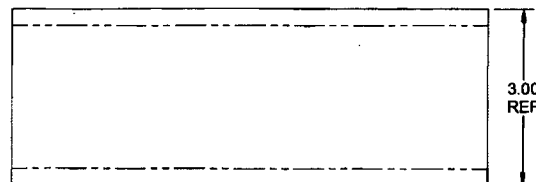
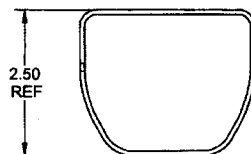
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- 1. MATERIAL: N/A
- 2. FINISH: CHEMICAL CONVERSION COAT PER DART QSI 004
POWDER COAT "WHITE" (4.3.5.1) PER DART QSI 004
BLACK ANTI-SKID PAINT PER DART QSI 005 & 4
- 3. TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4. UNITS: INCHES UNLESS OTHERWISE NOTED
- 5. BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6. IDENTIFICATION: P/N & B/N PER DART QSI 044 6.6 (REMOVED)
- 7. WEIGHT: 0.65 lbs
- 8. WELDING: PER DART QSI 004

Revision: 2

Page 1 (2 blank) of 2

11-00-00



D4342-1 STEP

RELEASED
2011-05-24
JMM

NOTES:

- 1) MATERIAL: MAKE FROM D2622 EXTRUSION
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.52 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4342	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		STEP, MAINTENANCE	NTS
DATE	10.12.17	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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Work Order Summary

April-07-15 3:56:25 PM

Page 1 of 3

Criteria : Work Order ID: 130446 Item ID: D4342-041 Product Family LARGE FAB
Work Order Start Dates 12/03/2015 to 12/03/2015 11:59:59 PM Work Order Required Dates 23/03/2015 to 23/03/2015 11:59:59 PM
All References
Work Order Status Complete

Work Order ID	130446	Required Qty	30.0000	Status Code	Complete
Item ID	D4342-041	Accepted Qty	30.0000	Scrap Qty	0.0000
Item Name	Step, LH Maintenance				
Current Acct Value	\$245.223				
Start Date	12/03/2015	Required Date	23/03/2015	Completed Date	02/04/2015 11:30:36 AM

Standard	** Actual **		** Acct. Value **	** Variance **	** Variance % **
Direct Costs	Total	Each	Each	Each	Each
Material	\$73.499	\$2.450	\$2.549	\$0.099	3.88%
Labor	\$2,087.951	\$69.598	\$46.842	-\$22.757	-48.58%
Outplant	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Variable Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
Fixed Burden	\$5,195.241	\$173.175	\$115.439	-\$57.736	-50.01%
Material Burden	\$0.000	\$0.000	\$0.000	\$0.000	0.00%
** Total **	\$7,356.690	\$245.223	\$164.829	-\$80.394	

Item ID/Item Name	Required Qty	Issue Code	Issue Date	Issued Qty	Cost Amount
D2622-120C Step Extrusion	2.0000		01/04/2015	2.0000	\$48.842
D2734 Step End Plate	60.0000		01/04/2015	60.0000	\$124.722
D3458-1 Step Mounting Plate	30.0000		01/04/2015	30.0000	\$82.890
D3458-3 Step Mounting Plate	30.0000		01/04/2015	30.0000	\$131.436
MS20601-AD4W2 Rivet	30.0000		01/04/2015	30.0000	\$7.059
Total Matl Amts:					\$394.949

Work Center HandFinish

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
CRUI01												
27/03/2015												
150			0.00	0.00	2.01	2.01	1.00	\$0.000	\$40.178	\$121.639	\$0.000	\$161.81
01/04/2015												
* 150			0.00	0.00	3.78	3.78	1.00	\$0.000	\$75.666	\$229.079	\$0.000	\$304.74

April-07-15 3:56:25 PM

Work Order Summary

Page 1 of 3

LAUG01

02/04/2015											
215		0.00	0.00	4.49	4.49	1.00	\$0.000	\$89.884	\$272.124	\$0.000	\$362.00
LAVI02											
27/03/2015											
150		0.00	0.00	1.30	1.30	1.00	\$0.000	\$26.006	\$78.733	\$0.000	\$104.73
01/04/2015											
200		0.00	0.00	1.96	1.96	1.00	\$0.000	\$39.134	\$118.478	\$0.000	\$157.61
150		0.00	0.00	0.04	0.04	1.00	\$0.000	\$0.706	\$2.137	\$0.000	\$2.84
Total:		0.00	0.00	13.58	13.58	6.00	\$0.000	\$271.574	\$822.190	\$0.000	\$1,093.76

Work Center Large Fab

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
CRUI01												
17/03/2015												
100		0.00	0.00	3.72	3.72	1.00	\$0.000	\$82.895	\$198.970	\$0.000	\$281.86	
18/03/2015												
100		0.00	0.00	2.99	2.99	1.00	\$0.000	\$66.731	\$160.173	\$0.000	\$226.90	
19/03/2015												
100		0.00	0.00	2.02	2.02	1.00	\$0.000	\$45.115	\$108.289	\$0.000	\$153.40	
120		0.00	0.00	7.89	7.89	1.00	\$0.000	\$175.977	\$422.392	\$0.000	\$598.36	
23/03/2015												
120		0.00	0.00	9.83	9.83	1.00	\$0.000	\$219.220	\$526.188	\$0.000	\$745.40	
24/03/2015												
120		0.00	0.00	8.75	8.75	1.00	\$0.000	\$195.213	\$468.563	\$0.000	\$663.77	
25/03/2015												
100		0.00	0.00	8.83	8.83	1.00	\$0.000	\$196.973	\$472.788	\$0.000	\$669.76	
26/03/2015												
120		0.00	0.00	2.34	2.34	1.00	\$0.000	\$52.304	\$125.543	\$0.000	\$177.84	
31/03/2015												
100		0.00	0.00	7.90	7.90	1.00	\$0.000	\$176.323	\$423.222	\$0.000	\$599.54	
01/04/2015												
100		0.00	0.00	4.43	4.43	1.00	\$0.000	\$98.914	\$237.419	\$0.000	\$336.33	
lavi01												
01/04/2015												
170		0.00	0.00	1.91	1.91	1.00	\$0.000	\$42.539	\$102.104	\$0.000	\$144.64	
LAVI02												
16/03/2015												
100		0.00	0.00	1.23	1.23	1.00	\$0.000	\$27.428	\$65.834	\$0.000	\$93.26	
17/03/2015												
100		0.00	0.00	0.00	0.00	1.00	\$0.000	\$0.000	\$0.000	\$0.000	\$0.00	
100		0.00	0.00	2.93	2.93	1.00	\$0.000	\$65.467	\$157.137	\$0.000	\$222.60	
100		0.00	0.00	2.62	2.62	1.00	\$0.000	\$58.490	\$140.392	\$0.000	\$198.88	
19/03/2015												

120		0.00	0.00	1.28	1.28	1.00	\$0.000	\$28.630	\$68.721	\$0.000	\$97.35
	26/03/2015										
120		0.00	0.00	3.14	3.14	1.00	\$0.000	\$69.960	\$167.922	\$0.000	\$237.88
	30/03/2015										
170		0.00	0.00	2.24	2.24	1.00	\$0.000	\$50.068	\$120.177	\$0.000	\$170.24
	31/03/2015										
170		0.00	0.00	1.17	1.17	1.00	\$0.000	\$26.190	\$62.862	\$0.000	\$89.05
	01/04/2015										
170		0.00	0.00	1.50	1.50	1.00	\$0.000	\$33.465	\$80.325	\$0.000	\$113.79
Total:		0.00	0.00	76.73	76.73	20.00	\$0.000	\$1,711.900	\$4,109.020	\$0.000	\$5,820.92

Work Center Powdercoat

Employee ID	Rout Seq ID	Labor Date	Setup Hours	Actual Setup Hours	Labor Hours	Actual Labor Hours	Nbr of WOs	Setup Amount	Labor Amount	Fix Burd Amount	Var Burd Amount	Total Amounts
ROQU01												
01/04/2015												
210			0.00	0.00	0.58	0.58	1.00	\$0.000	\$11.684	\$35.373	\$0.000	\$47.05
Total:			0.00	0.00	0.58	0.58	1.00	\$0.000	\$11.684	\$35.373	\$0.000	\$47.05